SUPPLEMENT TO

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Society of Public Analysts,

A MONTHLY JOURNAL DEVOTED TO THE ADVANCEMENT OF ANALYTICAL CHEMISTRY.

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Report of a Special Meeting of the Society of Public Analysts held February 15th, 1893, to consider a series of Resolutions drafted by the Council with reference to a proposed amendment in the Laws relating to the Adulteration of Food and Drugs.

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PROCEEDINGS OF THE SOCIETY OF PUBLIC ANALYSTS.

As already notified in our issue of last month, a special meeting of the Society of Public Analysts was held in the rooms of the Chemical Society, Burlington House, on February 15th, 1893. The meeting was convened to consider a series of resolutions drafted by the Council on the subject of certain proposed amendments in the laws relating to adulteration. There was a large attendance of members of the Society, and of other gentlemen interested in the working of the Food and Drugs Acts. In the unavoidable absence of the President (Sir Charles Cameron), the chair was taken by Mr. M. A. Adams. Amongst those present were Dr. Cameron, M.P., the Hon. H. A. de Tatton Egerton, M.P., Mr. Kearley, M.P., Mr. G. M. Allender, etc. Letters of regret at inability to be present were read from Sir C. Cameron, President of the Society, Sir Walter Foster, M.P., Mr. Brunner, M.P., Colonel Howard Vincent, M.P., Mr. H. J. Wilson, M.P., Sir Henry Thompson, Sir W. Pink, Sir Joseph Fayrer, and many others, including most of such provincial Public Analysts as were unable to be present.

The Chairman said that the meeting had been called under the auspices of the Society of Public Analysts, for the purpose of discussing a series of resolutions which, he presumed, were in the hands of all present. It would be noticed that these resolutions were of greater interest to the general public, and to traders liable to be affected by the operations of the Sale of Food and Drugs Acts, than they were to the Public Analyst himself in his professional capacity. He would remind those present that the subject which they were about to consider was altogether a modern institution. In point of fact, for practical purposes all that related to the Sale of Food and Drugs Acts was not more than twenty years old. It was not, therefore, a matter of surprise that in the first essay at legislation flaws should be found to exist, and in the first attempts at putting into execution a difficult measure technical difficulties should have become apparent. Between the legal and the technical difficulties, however, there was this great difference: that whereas, in the natural order of things, improvements in the technique of analysis were bound to follow as a necessary consequence with the progressive development of the analytical art, on the other hand, such legal flaws as existed in the Statute grew more and more conspicuous as time rolled on. And so it had come about that the Council of the

Society had had their attention drawn to the statutory aspects of the matter, a they had thought it would be a most desirable thing to invite representative m whose interests were so largely involved in the matters treated of in the resolutio to assist in their deliberations. In the name of the Society, therefore, he welcom all those who had honoured it by their presence that evening; and he cordia invited them, in the first place, to take part in the discussion when their experien could elucidate any point; and, when the proper time came, to signify acquiescen in, or disapproval of, each resolution when put to the vote. He proposed, suggested by the Council, to take the resolutions seriatim, to move them, then to a certain gentlemen to second them, and after that to ask anyone who felt disposed speak to do so. The first resolution was as follows:

"That amendment of the laws relating to adulteration is urgently required

He considered this was a kind of preamble, which would hardly require mu discussion. He would, therefore, with the permission of the meeting, unless someo wished to speak upon it, take that as agreed upon, and pass on to the seco resolution, namely:

"That the present Acts often operate unfairly on the retail traders, and th provision is necessary to ensure, in many cases of adulteration, t prosecution of the real offenders."

Mr. Fairley, of Leeds, in seconding the resolution, said that the present Ac failed in their operation with respect to retailers:

Firstly, in the want of uniform working. Wherever the Acts were inefficient worked, the dishonest adulterating trader could undersell the honest trader. T present system was also very unequal in its administration, as, by the vagaries of loc authorities, adjacent towns or districts differed most widely in their enforcement the Acts. In some places the food supply was well looked after, and the magistrat inflicted fines having some real relation to the magnitude of the profits derived fro the offences committed. In others, the inspection was inefficient, and the presen Acts neither provided nor suggested any means for securing that inspectors had som reasonable knowledge of their work, or that they should do that work. In som places the magistrates also inflicted fines which one day's fraud would be more tha sufficient to cover. He thought it was worthy of consideration whether a minimu as well as a maximum fine should not be fixed by law for certain classes of offences.

Secondly, there was the incidence of responsibility. The retailers ofte complained that the present Acts pressed unduly upon them. A retailer who sol an adulterated article of food, whether he knew that it was adulterated or no injured the public, and was made liable to a penalty. In common law, as anyon found in possession of stolen goods was liable to a penalty—and as in all cases o theft every effort was made to discover the original thief—so it should be with th adulterator of food. In his opinion, it was well worthy of consideration whether th adulteration of food and drugs should not be made an offence distinct from that selling such food. It ought to be a dangerous thing to manufacture adulterate articles, and it ought also to be a dangerous thing to take any part in supplying the to the consumer.

Thirdly, with reference to securing the identity of samples. It appeared easonable that the vendor or person supplying articles from which samples were aken for analysis should have the right to affix his own seal to the samples taken y the inspector in addition to the inspector's seal. If desired, the seal belonging to ie vendor should not indicate the origin of the samples. The more perfect and fficient any acts of this kind could be made, the more the honest traders had to ain by them; and he thought that no one would contend that the present Acts were ot capable of great improvement in nearly every point connected with their working.

Mr. Henry Gray could not agree with Mr. Fairley as to the fine inflicted for a ay's fraud being covered by a day's profits. He (Mr. Gray) believed that Mr. airley could not understand very much about the profits made by retailers if he oncluded that that was the case. He thought that the hardships of the retailer ere caused, not by retail men themselves, but by the wholesale vendors or the ackers of most of the articles. That ought to be made clear, and he hoped the oint would be discussed.

The Hon. Alan de Tatton Egerton, M.P., said he would give the meeting his xperience as chairman of a committee whose duty it was to see that the Sale f Food and Drugs Acts were properly carried out. In the early stages of his onnection with the committee, he remembered a prosecution being instituted by ie Vestry of St. George, Hanover Square, in a case of pepper adulteration, and he membered making a calculation for his own satisfaction, by which he showed that ie producer of the article—the packer, as Mr. Gray had called him—was making profit out of the adulteration of no less a sum than £1,200 a year. He knew that many cases it was the practice of the wholesale trader to pay the fines inflicted; e took the chance, and the law of chances, as was well known, was very much in vour of those who played the game. It was self-evident that where the wholesale ader could see his way to a gross profit of £1,200 in a year, he could very well ford to pay fines even at the rate of £5 a week, and still be a great gainer. A ange in the law as recommended in the resolution was very urgently needed; and e was clearly of opinion that the reform suggested by it must be for the benefit, not ly of the retailer, but, what was still more to be desired, of the general public.

Mr. Charles Estcourt, of Manchester, inquired whether this particular resolution as applicable to producers out of the kingdom. Was it suggested that the producers foreign countries should be pursued? He stated that although he had read of this a suggested amendment, it was evident that our Food and Drugs Act would t run out of this kingdom. He also stated that under the Margarine Act there as now no difficulty in reaching the importer or wholesale merchant. Indeed, in anchester, a week or so before, the inspectors had visited a wholesale merchant, d had taken samples from unmarked firkins, and these proving to be margarine, conviction ensued.

The Chairman thought that it would be impossible to prosecute the original enders when they resided outside English jurisdiction.

Mr. Estcourt said that in Manchester, if there was an absolute warranty given, d if it proved to be a false one by the fact that the Public Analyst certified the mple to be adulterated, the giver of the warranty was always prosecuted. But

a difficulty was that warranties were often not given, and that therefore the wholesale vendors were unreachable. That state of affairs should be guarded against in any amendments of the Act, and could easily be met by following the lines of the Margarine Act, by which an invoice became itself a warranty.

Mr. Adkins did not know whether it was competent for visitors to make suggestions for altering the existing state of affairs. He had come to the meeting with the intention of listening only; but as so few suggestions had been made, he would like to make one—namely, that the retail dealer and the wholesale dealer should be made co-defendants in the case. Then, when they were both before the magistrate, it would be possible to determine whether the wholesale or the retail dealer was the real offender.

Dr. Charles Cameron, M.P., said that he had been made an honorary member of the Society of Public Analysts in consequence of the part he took in the passing of the Act of 1875. He had at the present time a Bill before the House which was intended to meet certain difficulties in the Sale of Food and Drugs Act; and, among other things, he believed it would perfectly meet the difficulty at which the resolution was aimed. He proposed that every person who sold foods or drugs should sell them with an implied warranty; that the invoice should be a warranty, even on a verbal order, unless the vendor gave a written declaration to the contrary. The meeting would be interested to hear that the Federation of Grocers was ardently advocating a change in the law. Certain of the wholesale producers, such as the Coffee-Growers' Association, were also supporting the proposal. In connection with this measure, he (Dr. Cameron) suggested that the wholesale dealer should have his goods open to inspection in precisely the same manner as the retail dealer; and he was glad to say that Mr. Colman—who might be considered as the leading mouthpiece of the wholesale men—admitted that this proposal was reasonable. It would hardly be necessary to say that Mr. Colman did not agree with some of the other proposals of the Bill; he did so on the ground that it would involve him, and wholesale dealers generally, in a large amount of trouble; but he (Dr. Cameron) believed the effect would be to make the wholesale dealers more careful. Mr. Estcourt had asked whether the foreign wholesale dealers could be got at. Of course they could not. If the first man who sold the goods in this country was made to sell them with an implied warranty, he would thus be got at, and he would not then buy an adulterated article from the foreign producer. It would pay the wholesale man to have an analysis made of the goods he bought. If a dealer ordered pepper, and a man from abroad sent him a mixture, he had his remedy in not paying, and in leaving the other to sue him. He found so much interest taken in the proposed amendment of the Sale of Food and Drugs Act, and such a wonderful agreement so far as certain general principles were concerned, that he thought it would be quite feasible to get a Bill read a second time without opposition, on the understanding that it should go before a Select Committee. If that were done, all the parties interested would have an opportunity of representing their views; new clauses could be proposed and thrashed out, and everything would be put in a fair way for the matter to be taken up next session, with every prospect of its being carried to a successful issue.

Mr. E. Hudson Kearley, M.P., claimed to have some right to speak on the question, as occupying what might be termed a hybrid connection with the sale of food products. It would, perhaps, seem rather a curious anomaly that a man could claim to be a producer, a wholesale dealer, and a retailer, but, without going into details, he would say that he claimed to be in this position. In connection with the working of the Sale of Food and Drugs Act, he wished to say first that he believed it was generally admitted that the working of the Act was intended, primarily, to protect the interests of the consumer, and the drawback was that the Act was not being so throughly enforced as it might be. Of course, every person who came within the operation of the Act and suffered from some short-coming felt aggrieved; the retailer complained at times that he had sold an article believing it to be pure, and that, consequently, a hardship was being inflicted on him for the misdeeds of another person, over whom he had no control. He (Mr. Kearley) admitted that much could be said in that direction; but the retailer himself in very many cases was a flagrant and guilty offender, and as the nearest source of distribution to the consumer was naturally the retailer, he thought that it was very essential that the Local Authorities—such as they were—should be called upon to enforce the Act in a thoroughly sound manner. He would give some few details of importance, which were within his own cognizance, as to how the Act was being carried out in places where, if the Local Authorities performed their functions properly, it could be better carried out, especially in regard to the sale of margarine as pure butter. The cases could be well authenticated. The law had become a dead letter by reason of the Local Authorities failing to put it in motion; a Trade Protection Society had been formed, and the following were the results of their investigations. In Wandsworth a man was found to have been selling margarine as pure butter for some months. The Association took samples, and had them analyzed, and they communicated with the Inspector of Nuisances, as they understood he was the proper person to apply to, but apparently no steps were taken.—They had a similar case at Gravesend, and were afterwards informed by the inspector that a sample had been taken at their instigation, but was found to be pure. On a further sample being taken by the Association the same week, it was found to be largely adulterated.—A well-known tradesman at Tunbridge Wells had been repeatedly summoned and heavily fined, but never by the Local Authority. On a very recent occasion the amount of the penalty was £10, the case causing a great deal of local sensation. This man immediately plastered his window all over with posters, "Pure Butter, 1s. per lb.," but continued to sell margarine as such. He was now being summoned again, but had attempted to evade his liability by stating that it was his manager's doing. This man had a branch in another town, and was there summoned by the Association. He wrote to the officer whose name appeared on the summons offering him £10 if he would withdraw the summons. The letter was produced in court, and a fine of £15 was imposed. — A member of the Association recently purchased a business in the neighbourhood of Notting Hill, and employed the late vendor's manager. The latter at once stated that everyone in the road sold margarine at 1s. per pound as pure butter, and he wished to do the same. The new proprietor, however, declined to do so, and contented himself with supplying as good a butter as he possibly could

at a cost of 110s. to 112s. per cwt. His trade fell off, and he then called the inspector's attention to the matter, but was told to let others alone, and he would be let alone himself. This shop had, owing to this unfair competition, to be closed. — At Brixton a man had for a long time been in the habit of selling margarine as butter, and repeated demands were made to induce the proper authorities to take the matter up, but without avail. The Association sent their officer, who took a sample, and divided the same, when the man rushed at him, swept the samples off the counter, and told him to do his worst, and also told him that if he came there again he would be ill-treated.—A member of the Association referred to was recently proposing to buy a shop in the Holloway Road. The would-be vendor stated that he invariably sold margarine as butter, and that he did not fear any inspector. This same member also has a shop in Upton Park, and one of his employés left him to go to an opponent who was about to open a new branch. This man told his late fellow-employés that his present master was not so opposed to his own interests as his previous one, and had no scruples whatever as to honesty, that he never sold anything but margarine as butter, even at 1s. 2d. per lb. The Association then took samples, and finding the facts of the case to be as stated, summoned the offending tradesman, who went into the box, and his wife and son also, and they all swore that it was purely an accident, whereupon the magistrate dismissed the case, with costs against the Association.—Mr. Kearley said that it had been proposed to consider all goods coming from the wholesale dealer as being sold under an implied warranty. The only objection he (the speaker) had to this was, that supposing the retailer proved to be dishonest, how would it be possible for the wholesaler to know that the article sold retail was part of the identical one supplied by him, and for which he was supposed to be responsible?

Dr. Cameron explained that as the law now stood, if a retailer produced a written warranty from the wholesale dealer he was exempt, and the prosecution must be against the wholesaler. The only difference that he made was to suggest the acceptance of the invoice as a warranty.

Mr. Kearley would suppose that it was incumbent on the retailer to obtain a written warranty in order to be exempt. How was he to know that the sample supplied to him by the wholesaler was the identical one referred to. There was another suggestion made which he (Mr. Kearley) thought most appropriate, and might tend to get rid of a great many evils; that was, that inspectors should have the most free access to the warehouses of the wholesalers. He could speak as a large wholesaler, and he would maintain that it was only fair in the interests of the community that the inspector should have just as free access there as the inspector of factories had in factories. He should be empowered to go whenever he liked to take samples from the bulk, and the mere knowledge that an inspector might call at any moment would prevent adulteration going on.

Dr. Cameron remarked that a clause to that effect was contained in his Bill.

Mr. Kearley said it had been suggested that the foreign adulterator should be hounded to his den, and the opinion had been expressed by the Chairman that that was practically impossible. It was, indeed, impossible to go to his lair and find him there in the midst of his guilt; but he (Mr. Kearley) would not admit for a moment

that there were not means whereby he could be struck at a distance, for every article that was shipped from abroad must arrive at a port of entry, where it could be subjected to the examination of the Customs officials to see whether it was contraband. He thought that at that point the Customs authorities, in association with those officially interested in the prevention of adulteration, might make periodical examinations—continuous inspections, if thought necessary—so that adulteration might be stamped out or that the penalty might be paid. That would involve no loss to the consignee, because he would be only the recipient of the goods. The man who shipped the goods would be the sufferer, because the authorities on this side would confiscate the goods. He thought that the exporter from abroad would give up his evil practices if that were enforced. He was delighted to see that there was now some public interest taken in the subject. There were other Members of Parliament who had the question very much at heart. He would suggest that the Public Analysts, who were most concerned with the carrying out of the Adulteration Acts, should assist in incorporating into any Bill which might come before Parliament such provisions as would render it almost impossible for adulteration to go on at all. Public Analysts must necessarily possess greater knowledge than Members of Parliament, and, therefore, if there was a need, as was apparent from the unanimous expression of opinion at the meeting that evening, for the evil to be scotched if not killed, he would say that, with the combined knowledge of Public Analysts, and the desire to safeguard the interests of traders generally, they would succeed in getting the Acts to work in an amended form if necessary—and consequently confer benefit on the consumer.

The Chairman then put the second resolution, which was carried unanimously.

Mr. Pattinson (Newcastle-upon-Tyne) seconded the third resolution, which read as follows:

> "That in view of the fact that, as is shown in the Local Government Board reports, the Food Acts are practically dead letters in a large area of the United Kingdom, it is necessary that adequate provision be made for securing uniformity in their application and in their due enforcement."

He said that in the interests of the public the reform suggested was very much needed. According to the report of the Local Government Board, there were 27 boroughs and 4 counties in the United Kingdom in which the Act was completely ignored, and a great number of boroughs availed themselves of it to a very limited extent. He considered that an absurdly inadequate number of samples were sent to Public Analysts for analysis. This state of affairs was not due to there not being any necessity for carrying out the Act, because even now, of the samples sent in, at least 12 per cent. were found to be adulterated. In the districts where the Act was ignored there was no doubt quite as much adulteration, and probably far more. There were several reasons why the Acts were not carried out in those places: some wished to avoid the expense; in others the Authorities were composed mainly of tradesmen, and it was scarcely in human nature that bodies so constituted would be very active in trying to bring prosecutions upon themselves. Both in the interests of the public and of all honest traders, he thought the time had come when some

authority should have the power of insisting that the Act should be carried out thoroughly throughout the country.

The Hon. Alan de Tatton Egerton, M.P., said he would like to be permitted to move, not an amendment, but an addendum to the resolution; viz., to insert in the last line after the word "application" the word "standardizing." The object was to get at some means by which Public Analysts could know where they stood. At the present time there was a very great difficulty in carrying out the Acts with regard, for instance, to milk, as one of the most important matters, and with regard to butter, as another important matter, both as to the amount of fat in the case of milk, and as to the amount of water to be contained in the sample in the case of butter. There were other similar and, perhaps, subsidiary matters, such as pepper and mustard, and various other things which were to a certain extent mixtures; but he thought it was very important that there should be a standard fixed. At the present time—owing first to the proceedings of Somerset House, and secondly to the action of the magistrates following upon that—the standard by which milk was judged had been whittled down, until at the present moment it was next to impossible, except in very flagrant cases, to get any convictions at all. The same remarks applied equally to butter, in so far as adulteration with foreign fat was concerned, and more especially as to the amount of water it contained. There was another subject which was now cropping up, and coming very much to the front, and that was the question which was of special interest in his own county of Cheshire—he referred to what were technically known as "filled cheeses." All these subjects required the most careful consideration, and at the present time Public Analysts and the authorities appointing them were not supported by the one Authority, if the word could be used, by which they ought to be supported—the Authority set up by the Act, viz., Somerset House. Nothing short of the strong opinion of Parliament would ever bring upon the Minister concerned the pressure which ought to be brought upon him, in order that there should be a Departmental Committee, assisted by the best-known Public Analysts of the country, to establish, once and for all, what were to be fair standards by which all these prosecutions were to be conducted.

Mr. Cassal thought the introduction of the suggested word would strengthen the resolution; and while it might be advisable to discuss the matter under No. 5, there could be no serious objection to introducing the word. He seconded the amendment.

Dr. Cameron deprecated the introduction of the word. The question of standards was fought out very fully when the late Bill was before the House. It possessed the drawback that if a standard were adopted for milk, the standard of the lowest milk must be taken.

Mr. Otto Hehner: No.

Dr. Cameron said he could show that Public Analysts objected to the fixing of a standard. Lowest standards might be fixed, but it was a question which would have to be fought out. He had at one time been entirely favourable to standards, but the reasons which were adduced against the principle had caused him to entertain a hostile opinion to any attempt to standardize.

Mr. Otto Hehner said it had been asked, Why were these Acts not enforced?

Whose fault was it? Clause 10 of the Sale of Food and Drugs Act made it incumbent upon all vestries and district and county and borough authorities to appoint one or more Public Analysts. The Local Government Board had, in spite of much resistance, for years brought pressure to bear upon various authorities, and had compelled them to appoint Public Analysts, and the result was that 235 appointments had been made. But there was nothing whatever in the Act of 1875 to force the Authority to apply it. It was absolutely essential that the law be amended, and that it should not be left to Local Authorities to apply or neglect it just as they pleased. The Analyst had nothing whatever to do with the carrying out of the Acts, except to analyze the samples which were brought to him. He had nothing to do with the collection—he did not even know where the samples came from; and, in fact, he was absolutely in the hands of the Authorities above him. It was very seldom that the inspector had *carte blanche* from his Council to do as he pleased. The inspector mostly collected samples when he was ordered to do so either by the Town Council, the Food and Drugs Committee (if there was one), or by the Sanitary Committee. Not unfrequently a resolution was passed by the Council, or the Committee, that the inspector should collect a certain number of samples, thereby conveying sufficient warning to all whom it might concern. The inspector, therefore, was also powerless, although in his (Mr. Hehner's) opinion he often might do a great deal more than he did. An inspector, as a rule, was saddled with many other duties. In counties and in small boroughs it was very often the case that the police, or the inspectors of weights and measures, acted as inspectors under the Sale of Food and Drugs Act. If a tall police-sergeant went into a country village shop and asked for a pennyworth of mustard—which was a not very usual occurrence in the ordinary course of business—then, of course, the dealer was forewarned, and he took uncommonly good care to supply him with a genuine article. He (Mr. Hehner) knew from his own experience that this applied to very many other articles. It was a farce to expect that men who were well known in a rural district should succeed in putting down adulteration, however anxious they might be to carry out their office in an efficient manner. What was wanted was a system whereby proper inspectors would be appointed; but as the Acts were worked at present these, if appointed, would have nothing to do. It might appear at first sight that in many cases the Acts were not enforced because the Councils in towns and cities contained members—as they frequently did—who were directly interested in the sale of food and drugs. If, however, the reports of the Local Government Board were referred to, it would be seen that about the same proportion of County Councils, which were mostly composed of county gentlemen, failed to apply the Acts just as much as the Town and City Councils, which often largely consisted of shopkeepers. What the reason was, he acknowledged, he could not fathom. The delinquency, so far as the counties were concerned, was greater than would appear at the first blush. It could be shown that year by year the Act was being more worked. From the year 1877 to the year 1881 only 16,668 samples were taken, or one for every 1,520 of the whole population of England; in the next year (1882) 21,772 samples were taken, or one for every 1,237 of the inhabitants; from 1887 to 1891, 26,846, or one for every 1,060 inhabitants; and in 1892 29,028 samples were taken, or one for every

999 inhabitants. But, as a matter of fact, that progress was due to the spirited action of a very few Authorities, as he would proceed to show. There were a few districts which carried out the Act honourably, and they brought up the average. But, then, what about the boroughs and counties which did not apply the Acts? It appeared from the last annual report of the Local Government Board that, of 55 administrative counties in England and Wales, only 13 had worked the Act at all fairly, *i.e.*, in accordance with the requirements of the Local Government Board —requirements which were entirely theoretical; namely, that one sample should be taken for every 1,000 inhabitants. Eleven other counties had taken one sample to every 2,000 inhabitants—about half as many as, in the view of the Board, they ought to take; whilst the majority of 30 counties either did not apply the Act at all, or contented themselves with a dozen samples per annum or less, which was only just sufficient to prevent their being stigmatized in the Government reports as malefactors to the inhabitants. Thus, in Wales, with the exception of Glamorganshire, not one county authority had done anything that might pass for its duty to its inhabitants. In the whole of Wales, which contained a rural population of 820,000, 174 samples were taken per annum. Then, with regard to boroughs, out of 131 given in the report, only 39 had worked the Act at all honestly, another 39 had made a more or less weak attempt to the extent of about one sample to every 2,000 inhabitants, and no less than 61 had taken no action at all, or only the pretence of action; 27 had never taken a single sample. As the hon. member for Devonport was present, he thought it right to inform him that Devonport was one of those places. In fact, the greater portion of England flagrantly neglected to carry out the Acts. He would give a few instances of bad cases in 1892: Cornwall, with 299,000 inhabitants, was satisfied with taking 29 samples per annum; Monmouthshire, with 197,000, took 16; Norfolk, with a population of 288,000, took 35 samples; Northumberland, having 260,000 inhabitants, took only 28 samples; and Oxfordshire, with 127,000, was content with the small number of 14 samples; whilst Devonshire, Derbyshire, Hertfordshire, Nottinghamshire, Shropshire, Wiltshire, Yorkshire, and many others worked the Acts still less—that is, had almost neglected to work them at all. From the Census returns he came to the conclusion that, out of every 100 inhabitants in the kingdom, two were dealers in articles which came under the Sale of Food and Drugs Acts. The Census did not state how many establishments there were; but, for the purpose of comparison, he would take it that four persons on the average constituted an establishment; it would follow that for every 200 persons there was one shop vending food, drink, or drugs. The Government recommended that one sample should be taken for every 1,000 head of population; so that at this very modest figure each shop would be visited once in five years. When it was considered that milkmen changed their milk, or got new supplies twice a day; that each grocer dealt in a multitude of samples subject to the Acts which were frequently renewed, it became obvious that the requirements of the Local Government Board were so absurdly small that they did not meet the case. It could only be the sheer blindness of the Authority which prevented their doing their work. In most cases, also, magistrates looked upon adulteration as a small matter. A small dealer, say, is summoned for having sold a pennyworth of milk containing 10 per cent. of added

water; the magistrates calculated that one-tenth of a penny was not really very much of a fraud. They generally looked upon the offences in proportion to their actual money value, without touching upon or apparently even understanding the broad question of the good of the country. In the three classes of butter, milk, and spirits alone, he (Mr. Hehner) calculated, upon the very lowest computation, that the country lost every year, or paid to somebody who ought not to have it every year, about £2,000,000. The value of the imports of butter into England, so far as he could make out, amounted to something like £12,000,000 worth per annum, and of margarine about £3,000,000. What the value of the milk-supply of the country was he would be afraid to say; but anyone could calculate from these quantities, and the percentages of adulterated samples found, how immense the loss was to the country by the adulteration of these articles. If magistrates would only look upon the broad side of the question, and not at the trivial one, and would make up their minds to stop the evil, he believed they could render enormous assistance in putting a stop to adulteration. In his opinion, by far the greater bulk of the fines inflicted under the Act were ridiculously small—they were often as little as 5s. or 2s. 6d.; and when a Local Authority had for some time set the Acts in motion, and had had offenders brought up in the police-courts, and when the heavy machinery had been brought into motion and a fine of 1s. was imposed, they thought it was not worth while to work the Acts any more. These were the main reasons why the Acts largely failed in their objects.

Mr. Thomson wished to draw attention to the question of introducing the word "standard." The matter was one which required discussion.

The Chairman thought the matter could be dealt with under the fifth resolution.

Mr. E. W. Voelcker thought the matter could be made very much clearer by inserting the words "uniformity in." He thought it desirable that the word "standardizing" should not be introduced.

Mr. Cassal thought that an amendment might be inserted in resolution 5, and then the words "uniformity in" might be used.

Dr. Frank L. Teed strongly objected to standardizing at all.

Mr. Pattinson could not see any objection to the words "uniformity in" being embodied in the resolution.

The Chairman suggested that the question of "standard" had better be postponed until resolution 5 was under consideration.

The Hon. Alan de Tatton Egerton, having withdrawn his amendment, the third resolution was then agreed to.

The Chairman then called upon Dr. Turner to second the fourth resolution, which read as follows:

> "That in order that the Local Government Board should have better control over the working of the Acts, a portion of the expenses of working them should be borne by the Imperial Revenue."

Dr. George Turner hoped that if he slipped out of one resolution into another the meeting would forgive him. The resolution which he had the honour to second was one of considerable importance, because he believed that upon it the whole of the benefit to be derived from any alteration in the Acts would hang. Some people

might be disposed to think that it would be better if each district were to work on its own responsibility. But there were certain things that people did not do well for themselves. If, for instance, a man required to have a tooth extracted, he generally asked someone else to put the forceps on. There was no doubt that the whole matter hinged on the question of money. Local Authorities and County Councils could not be trusted to carry out the Acts and to make the appointments under those Acts. They tried to cut down the expenses, consequently it was not a certainty that the men who were selected for these appointments were perfectly fitted for the work. Sometimes they were not. Again, Public Analysts were shamefully badly paid. It was wonderful how cheap chemistry was. If the matter were left in the hands of the Local Government Board, and it was made essential that a certain number of samples should be taken per head of the population, it would be of great benefit to the country. County Councils were not capable of seeing the benefits that lay in the Acts. The amount of money which went out of this country as payment for things which might very well be raised here by small farmers was something very considerable. He was perfectly sure that the agricultural depression in this country was largely due to the fact that the farmer did not bestir himself to pick up that which was beneath his feet. Some articles coming from abroad were scientifically adulterated, and the manufacturers there could always cut the throats of the producers in this country by adulterating down just below the price at which the article could be honestly made. There could be no doubt that scientific processes of adulteration abroad were lowering prices in this country to an extent which made it hardly worth while to produce. There was a Margarine Act, which made it compulsory that every sample of margarine should be labelled as such. He could go through twenty or thirty villages in almost any part of the country, and he would never see a sample of that commodity. The reason was very simple—it was sold as butter; and everybody who knew anything about the subject knew that margarine was disposed of in this way. It was essential for the agriculturists that they should have cheap agricultural labour, but if the labourer was to be cheated out of 25 per cent. of the profit of his labour, and if he were getting 12s. a week, and was cheated out of 3s., the retail trader was simply being paid 3s. a week out of the labourer's earnings, and the labourer got the 9s.

Mr. M. Henry said that he would be very sorry to see a portion of the expense borne by the Local Authorities. He considered that if an Act of this halting character were passed it would be just as farcical in its application as the present one. Only an absolutely compulsory Act, for which the Government bore the cost and collected the fines, would meet the case. If the fines inflicted by magistrates were contrasted, it would be seen that if a publican was summoned for selling adulterated beer, a fine of £25 might be imposed; whereas, if, on the other hand, a case of adulterating a sample of butter was taken, the fine might be 5s. or 2s. 6d. In the one case it was a Government-engineered prosecution, instituted by the Government for revenue purposes, and the best legal experts were brought to support the prosecution; in the other case solicitors who half the time did not know their business — and who were not trained to it, either — were employed. He could give an instance, within his own knowledge, where a man boasted that, in one shop in the North of England, he made a profit of £20 a week out of selling margarine as

butter; and that man had a great many shops throughout the country, and the Local Authority where he swindled the public had never yet instituted a single prosecution. He (Mr. Henry) did not believe that the Act would be enforced in a more satisfactory manner if the Local Authorities bore half the expense of doing it. He was not speaking from the Public Analyst's point of view, but from that of the consumer. He moved as an amendment, "That this meeting asks that there shall be a compulsory application of the Adulteration Acts by Local Authorities under the direction of a Ministry of Public Health."

Mr. Angell referred to the manner in which some retailers labelled their articles. He knew of a case of an article being labelled thus: "This is sold as a mixture of whatever it shall contain." The substance referred to was lard.

Mr. Cheshire thought that the Act could be made a great deal more efficacious if Public Analysts had a little more to do with the working of the Act. He knew that, in some districts at any rate, the Public Analyst made the suggestion that so many samples should be obtained. If the Public Analyst had more liberty in that direction he could make valuable suggestions to the inspectors. He also thought that if the Local Government Board had a little more control in that way, Public Authorities would be able to get at the wholesale traders more easily. That was done to some extent at Hastings. If a retail trader complained that he was being supplied with an adulterated article, the inspector was ready to go to his shop and take a sample at the time the goods came in.

Dr. Newton thought that, if Public Analysts had the courage of their opinions, they would insist that the inspectors should be under the control of the Public Analyst. The taking of samples was half the battle, and if a man who was known to the shopkeepers of a town was employed, there would be no necessity for a Public Analyst, because the shopkeepers would always give an inspector who was known a genuine sample.

Mr. Henry said that the resolution suggested that the Local Government Board should be asked to contribute a portion of the expense. He thought that the Local Authorities would not be very prompt in coming forward with the other portion. His amendment was that the working of the Act should be made compulsory.

Mr. Cassal said that the point was not clear. Did Mr. Henry suggest that a portion of the expenses should be paid by the Local Authorities, and a portion by the Local Government Board? or did he suggest that the whole should be paid by the Local Government Board, or the whole by the Local Authorities? As a matter of fact, under the Acts Public Analysts were really officers of the Local Government Board, as well as officers of the Local Authorities.

Mr. Henry replied that he suggested inspectors should be appointed, and that they should be sent round the country just as the Excise inspectors were.

The resolution as printed was then put to the meeting, and carried.

The fifth resolution was as follows:

> "That in view of this, it is desirable that there should be a duly constituted Chemical Department of the Local Government Board, with whom the Public Analysts, as officers of the Local Government Board, should be placed in direct relation."

Mr. Alfred H. Allen, in seconding the resolution, said that counsel were of opinion that there should be an official Chemical Department, which did not exist at present. It was proposed that there should be a Chemical Officer attached to the Local Government Board. There was already a Medical Department, which gave authoritative decisions on public medical questions, but the chemical side was left unrepresented. He constantly received from the Canadian and American Governments most valuable blue-books upon various matters connected with the Food and Drugs Acts of those countries, but the Department here did not take the trouble to send out such books, with two exceptions, to their own officers. He only knew of the reports issued by the Local Government Board by hearsay. Although his own reports, and those of other British Public Analysts, were quoted in the returns of the Local Government Board, he and they were not in touch with the Department. It was a fact that legislation was projected and was actually being carried out in America to stop the adulteration of lard with cotton-seed-oil before Public Analysts in this country were even aware of the adulteration. He had also heard it stated that the adulteration of pepper with ground olive-stones—known as *poivrette*—was well known to a Government Department in this country; but it was not communicated to Public Analysts, who were left to find it out for themselves. If there were a Chemical Official attached to the Local Government Board, it would be his business to be in touch with foreign officials occupying similar positions; and it would be his duty, if he had reason to believe that a new form of adulteration was being carried out, and had been noticed in certain districts, to warn Public Analysts to be prepared for it. It would be found that such an official would have plenty to do to look after these and kindred matters, together with the water supply, which would be a most important duty of the Department. He did not suggest that the proposed Chemical Officer should act as a referee under the Sale of Food and Drugs Act. He thought that, if the certificate of a Public Analyst upon any sample was disputed, the Chemical Officer should be applied to, and he should send the disputed sample to an Analyst who had special experience in the particular kind of analysis upon which the certificate was based. At the time the present Act was passed the only court of reference thought to be available was the Revenue Laboratory of Somerset House, and the officials there had thrust upon them a disagreeable additional duty outside and beyond their ordinary work as Excise chemists. They had a score or two of disputed samples submitted to them annually, quite apart from their ordinary duties, and they were expected to make themselves conversant with the best methods of food and drug analysis. On that account they were placed in a false position, and one it was not fair to place them in. They had been called on to undertake duties with which they were not familiar, and had evaded the responsibility attaching to their office. An incompetent dairymaid in Ireland prepared butter containing 19 to 20 per cent. of water, and as the butter was not made for sale, the referees regarded such butter as genuine, and fixed their limit accordingly, thus making the said dairymaid the referee under the Act. He, Mr. Allen, believed that to fix standards by Act of Parliament would be a very great mistake. It was true that standards had been established in the case of spirits, but, then, spirits were capable of being analyzed with very great accuracy, and their strength could be adjusted with precision; hence they were not liable to the

variations which were common to butter and milk. Any standards resolved on should be fixed by the proposed Department of the Local Government Board in consultation with experts, and they ought to be capable of revision at any time by that Department as a central Authority. Standards under such circumstances might be tolerated; but he thought that to lay down standards for food generally would tend very largely to prevent improved processes of analysis being devised. The standards should be laid down by the best authority. The incompetent or careless dairymaid was at present the authority with regard to butter. She was the referee—and that was a thing which was not to be tolerated in future. With reference to the extent to which adulteration was being carried on, he had made a calculation, based on actual analytical results, showing that in Sheffield last year the public lost upwards of £5,000 by paying for water instead of milk.

Mr. Thomson said he had been instructed that if he certified that a certain sample of milk had been adulterated with a given quantity of water, a prosecution could be instituted; but that if he gave the precise facts and stated that the milk was adulterated with a certain quantity of water, as judged by a standard, no action could be brought against the person who sold the adulterated milk. He thought that standards should be recognised by the Adulteration Act as a means of simplifying the work of Public Analysts; then the prosecution of a person who sold milk under the standard would not necessarily prove him dishonest. He believed under the present arrangement honest men had been charged with and fined for "fraudulently adulterating their milk with water."

The resolution was then carried.

The Chairman then called on Mr. Cassal to second the sixth resolution as under:

> "That the present system of reference in the case of disputed analyses is unsatisfactory, and ought to be entirely remodelled."

Mr. Cassal believed that the resolution which had been placed in his hands by his colleagues was, perhaps, the most difficult and delicate of all the resolutions on the paper. He was, however, considerably relieved by the fact that Mr. Allen had already dealt with the subject, and had, indeed, said enough to warrant the passing of the resolution by the meeting. That the present system was unsatisfactory, he thought most persons who had any experience of the working of the Acts would agree. The system had never worked well, and it was obvious to Public Analysts, to Local Authorities, to inspectors, and to magistrates that that system was objectionable from every point of view to all who had anything to do with the Acts, either as prosecutors, or for prosecutors, or as defendants, or for defendants. It was necessary, in order to understand the resolution, to explain the origin of the reference of samples in disputed cases to Somerset House. It had already been shown that evening that at the time of the passing of the Adulteration Act Somerset House was the only place of bottles and tubes; it was the only Government Department that was supposed to be in any sense scientific. All the others were, apparently, not scientific in any sense whatever. But the Somerset House Chemical Department, he believed he was right in saying, had originated in a Department which was engaged in the determination of the amount of alcohol in spirits and ordinary

alcoholic liquids, and in the determination of the amount of moisture in tobacco; and he hoped he would not be considered as doing an injustice to gentlemen whom he regarded personally as friends by stating what he believed to be true—namely, that for many years their scientific labours were confined to the estimations referred to. It was, however, a fact that since the passing of the Sale of Food and Drugs Act, and the thrusting of the reference in disputed cases on to the shoulders of the officials at Somerset House, those officials had laboured hard to master the processes of analysis which had been mainly discovered by the Public Analysts of the country, and which had been principally brought out at the meetings of this Society. He was prepared also to acknowledge that the Somerset House officials had made some investigations of their own which it might have been better if they had not made, and that they had stated some results which, however, they had never subjected to the test of scientific criticism at the Society of Public Analysts or elsewhere. He might, however, congratulate the officials of Somerset House on the measure of success which had attended their efforts, while he could only regret that that success had not been greater. It was an unfortunate fact that the relations existing between the Somerset House officials and the Public Analysts, in consequence of disagreements with respect to certificates, had not been cordial, as the Past President had said, ever since the passing of the Act. He would take the opportunity of correcting the assumption which had recently been made by a writer in a paper which he presumed was held by some to be an important print—namely, the *Pharmaceutical Journal* —that there was any bitter or unpleasant personal feeling on the part of Public Analysts towards the gentlemen who filled official positions at Somerset House. He very much feared that some of those gentlemen themselves thought that there was; but he thoroughly believed that all Public Analysts were most anxious to remove any impression of that kind, and that it had no real foundation. He believed that they entertained—and he on his part most certainly did entertain—the greatest personal respect for Dr. Bell and for his colleagues. He (Mr. Cassal) considered that their views and proceedings, while often mistaken, were quite conscientious. Having said this, he must state his belief that all Public Analysts were strongly of opinion that the Somerset House officials should have nothing whatever to do with the Sale of Food and Drugs Acts. It was no doubt difficult for his colleagues and himself to make good their position in the eyes of others who were not as intimately acquainted with the real circumstances of the case as they were themselves. It was difficult for them to fully explain even to reasonable and fair-minded men how it was that they had long held the opinion that the system of reference should be remodelled altogether, and why it was that they thought, as shown by the resolution immediately preceding, that for the Somerset House reference should be substituted a reference to a Chemical Department of the Local Government Board, to which should be attached a properly-qualified Chemical Officer, who should of necessity have been a Public Analyst of extensive experience, and who would seek, in special cases of reference, for the assistance of persons specially qualified to deal with such cases. He would point to the excellent address delivered by the Past President (Mr. Hehner) as containing a very clear statement of the case, and he (Mr. Cassal) did not need to repeat the statement. Mr. Hehner had fully proved

in his paper how impossible it was for the Public Analysts and the Authorities concerned with the application of the Acts to hope that there would ever be a change for the better at Somerset House. Somerset House had, in point of fact, "the defects of its qualities," if qualities was the right word to use. The Somerset House officials had been guilty of the much-maligned standard-fixing, and that in a manner which was quite unscientific; and, most unfortunately, they had committed themselves to particular positions on several questions, and would have to stand or fall with them. Whether in science or in pseudo-science, when a person had once committed himself to an erroneous theory or to an incorrect method, it was exceedingly difficult to make him see that he was wrong, and still more difficult to make him admit it. And it was also extremely difficult, if not impossible, to get any Government Department to admit itself to be in the wrong, upon any point whatever, even if the demonstration of the fact amounted to a *reductio ad absurdum*. It could not do so. It was not in the character of the organism; inasmuch as it had been proved up to the hilt, in the papers which had been read before the Society and elsewhere, that the course adopted at Somerset House upon certain matters was altogether wrong, and, indeed, scientifically absurd; and as, outside Somerset House, no scientific man whatever with any knowledge and experience of these matters thought for a moment that the position adopted by that Department was other than entirely untenable. The result was simply this: that on the one side there were the Public Analysts protesting against the reference of samples, upon portions of which they had presumably reported, to officials who held views which were not scientific—which were, in fact, entirely erroneous; and, on the other side, there was a Government Department restricted and confined by views which were like the laws of the Medes and Persians, and occupying a position from which they could neither draw back nor move forward. The best way out of the difficulty was the one suggested in the fifth resolution—namely, to relieve the officials at Somerset House from all connection with the Acts, and to place the matter of reference in the hands of a new authority thoroughly acquainted with the most recent scientific facts and methods, and in a position to obtain the latest information. Public authorities and Public Analysts had every right to expect these qualifications in a court of reference. He felt it incumbent upon him to state that additional difficulties had been created by a particularly unfortunate attitude on the part of the Somerset House officials. This attitude, which had shown itself on various occasions, appeared to consist in this: that the Somerset House official laboured under the impression that, as a Government official, he was in every sense a very superior person; and so much had this feeling appeared to pervade the atmosphere of Somerset House, that they had actually been told in public—certainly under the mellowing influence of the festive board—that, as Public Analysts, they had very much improved of late years; that they had gradually, in process of time, and under the patriarchal education of Somerset House, advanced to such a position that they were gradually beginning to see the error of their ways. No doubt many felt some joy on hearing this; for it might lead some persons to hope that under this protecting *ægis* poor benighted Public Analysts might ultimately be able to make as wonderful analyses, and to draw from such analyses conclusions as startling, as those of Somerset House. He

believed he was right in stating that the number of samples officially analyzed at Somerset House under the Sale of Food and Drugs Act did not exceed about 40 per annum. And although he believed that recently analyses of foods and drugs had been conducted by the Department for other Government offices, to say that the officials concerned possessed a tithe of the experience which would entitle them to adopt a paternal and patronizing attitude towards the general body of Public Analysts of the country had only to be stated to be refuted as ridiculous. It was, as he thought he had shown, quite hopeless to expect any alteration for the better at Somerset House, however willing the present officials might be to effect such an alteration, and however ready any future officials might be to effect it, bound down as they were, and would be, by the benumbing shackles of red tape, and the deadweight peculiar to an old-established and somnolent Government Department. One way out of the difficulty had been shown; and without entering further into the explanations (many of which would be of a very delicate nature) that could be entered into to prove that it was highly undesirable for the officials of Somerset House to continue in their present position, and for the system of reference to remain unaltered, he trusted that he had said enough, and that he had said it without being in any way offensive, to show the importance of providing the Somerset House officials with a golden bridge over which they might pass quietly and gently, and whereby they might gracefully and completely sever their connection with the Adulteration Acts.

The resolution was carried unanimously.

The seventh resolution was as follows:

> "That the compulsory combinations of the two offices of Medical Officer and Public Analyst are in the public interest undesirable."

Dr. Alfred Ashby (Reading) said that he did not know why he had been asked to second the resolution, unless it was that he was one of the sinners who held the combined appointments of Medical Officer of Health and Public Analyst. In the first place he would say that he understood the resolution to imply, not absolutely that the two appointments should not be held in exceptional cases by one and the same person—for, if that were so, the profession might be the poorer by the loss of such men as Dr. Adams and one or two others, who had largely contributed to analytical work—but that the holding of the two appointments by one person was, as a rule, undesirable, and was necessarily becoming more so every day. The training of the medical man and the chemist were so widely different that it by no means followed that because a man was fit for the post of Medical Officer of Health he was also fit to hold the office of Public Analyst. Indeed, quite the contrary was the case. The smattering of analytical knowledge required to obtain a diploma in Public Health in no way qualified the holder as a Public Analyst. It was often thought by Local Authorities that the holder of such a diploma was fit to be a full-fledged Public Analyst. Nothing could be more absurd. It was lamentable to think how low the Public Analyst had fallen in the estimation of some Local Authorities. He had heard of a case of the Medical Officer of a large borough being offered the appointment of Public Analyst for £5 a year, and this was,

indeed, bringing the office of Public Analyst into contempt. With such appointments, the very large body of honourable traders, who were to be found in all parts of the country, must necessarily suffer, for the thoroughly efficient Public Analyst was their greatest friend. He was of opinion that no local authority should make it compulsory for the appointments to be held by the same man—no one should be placed in the false position of being Public Analyst if he was not fitted for the office: but if a Medical Officer of Health happened to be an efficient chemist, the fact of his holding that appointment should not debar him from holding the office of Public Analyst.

Dr. Turner said that he also had been Public Analyst and Medical Officer of Health at one and the same time. He was therefore very well able to express an opinion, and he unhesitatingly condemned the practice of combining the appointments. He did not think Medical Officers need object in the slightest to the office of Public Analyst being taken from them. They would find in their own special department a number of difficult problems sufficiently large to last them their lives, and they would probably leave legacies in problems, if in no other way, to their children.

Dr. Hake thought many others would agree with him that, under ordinary circumstances, the medical student had not the opportunity of obtaining such knowledge as would fit him to undertake the duties of a Public Analyst; and he thought, further, that everyone present would agree that certain gentlemen who had held the dual position were gentlemen of very exceptional attainments. Some medical men, as was well known, had been brilliant exceptions, as, for example, the late Dr. Tidy, who was an admirable chemist.

The resolution was then put to the meeting, and carried unanimously.

The last resolution read:

> "That provision should be made to ensure better than heretofore the proper qualification of officers under the Act."

Mr. Hehner seconded the resolution, and said that it was closely connected with the one just passed. When the Sale of Food and Drugs Act was passed there was no large body of men, such as the Act created, fully qualified to undertake the duties required under the Act, and everybody who had even a slight claim to the knowledge, experience, and skill which the Act required was considered fitted for an appointment. The consequence was that, in the first few years, there was a great deal of friction and more or less incompetence, with the result that the work and the value of Public Analysts had been belittled for many years; but this had now, to a great extent, died out. Since that time the science of detecting adulteration had made immense progress; nevertheless, it was infinitely more difficult nowadays, in spite of all the labours which Public Analysts had bestowed on the subject, to come to a definite conclusion as to whether a sample was adulterated than it was seventeen years ago. Adulteration had now become a fine art. Analysts were also at that time very confident that they could analyze all the articles submitted to them. In fact, prior to the passing of the Food Act, a Parliamentary Committee inquired into the means which were available to put an Adulteration Act into operation. Chemists gave

evidence before the Committee to the effect that there was no scientific difficulty whatever. If analysts were asked now if there were any difficulties they would say that there were, and great ones. At that time it rested with the Local Authority to say whether a man had the requisite knowledge, and this was still the case. In fact, the vestries and councils were actually made the judges of the capabilities of a man, though they had not the least idea what was required. Every man who had studied chemistry even in a hospital was taken to be, as a matter of course, a fit and proper person to undertake the duties required by the Act. But, in reality, to become an efficient Public Analyst, he must have, not only a certain amount of knowledge, but wide experience, which could only be gained by years of work in a proper laboratory. It was thought by the Council of the Society of Public Analysts that the time had long ago come when the councils and vestries should no longer have the responsibility of appointing Public Analysts without having reliable evidence, which they could understand, before them. At present Local Authorities had a number of applications submitted to them, and the only means of guidance afforded was by the very objectionable means of testimonials. He had seen testimonials given by persons who could not possibly be judges of the needful qualifications, from which no opinion whatever could be formed of the qualifications of a man. The consequence was that, in some districts—and especially in those where the Act was not worked—men had been appointed who were not fit for the post, and who certainly did not add to the dignity of the profession. It was essential that the electing body should know that the man they elected was as well qualified as the Medical Officer of Health, and other professional officers employed by it. Therefore he was strongly of opinion that the next Act should embody a clause to ensure that a Public Analyst was as qualified for his work as a Medical Officer of Health was for his. How that was to be done he would not enter into. Two Chemical Associations in this country were moving to ensure the proper qualification of their members. The Institute of Chemistry was doing so from the point of view of general qualification, and he might say that the Council of the Society of Public Analysts, as the only body of professional analytical chemists in England, had had under consideration, and had adopted in principle, a scheme for instituting examinations with a view to secure the efficacy of candidates aspiring to the office of Public Analyst especially.

The resolution was then put to the meeting and carried unanimously.

The Chairman said that the Society of Public Analysts, although numerically small, was highly representative, as it practically included all the Public Analysts of England; and feeling, as the Council did, that the subjects set down for discussion were of very high importance—more to the outside public and the traders than to themselves professionally—they deemed it desirable that strangers should be invited—Members of Parliament, and those who dealt in food and drugs as a business, in order that they might have the benefit of their assistance in the deliberations. He had already welcomed them in the name of the Society, and now he thanked them for their presence and the part they had taken in the discussion.

A vote of thanks to the Chairman, moved by Dr. C. R. Alder Wright, and seconded by the Hon. Alan de Tatton Egerton, M.P., concluded the business of the meeting.